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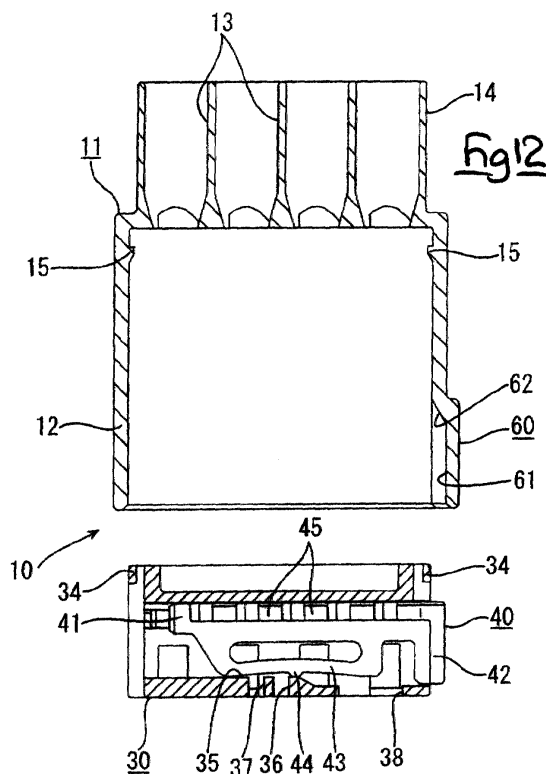
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(54) **Electrical connector**

(57) The invention permits a terminal retaining body provided with a retainer to fit smoothly into a cylindrical body.

A male housing 10 is formed by fitting an inner housing 30, in which a retainer 40 is attached, into a hood 12 of an outer housing 11. A protruding member 60 protrudes outwards from a right side of the hood 12, and a guiding groove 61 is formed in a concave manner from an anterior end of an inner face of the protruding member 60. A guiding member 62, which forms an inwardly inclining face, joins with the posterior of the guiding groove 61. If the retainer 40 protrudes from a side face of the inner housing 30 when this inner housing 30 is being fitted, the guiding member 62 engages with the retainer 40 while the inner housing 30 is being pushed inwards, and automatically pushes the retainer 40 inwards.



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# EUROPEAN SEARCH REPORT

Application Number  
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| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                  |                                                            |                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------------|
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Citation of document with indication, where appropriate, of relevant passages                                                    | Relevant to claim                                          | CLASSIFICATION OF THE APPLICATION (Int.Cl.7)            |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | US 5 518 428 A (ONODA KATSUHIKO)<br>21 May 1996 (1996-05-21)                                                                     | 1-3,8,11                                                   | H01R13/436                                              |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | * column 3, line 64 - column 4, line 9;<br>figures 3,4 *                                                                         | 4-7                                                        |                                                         |
| Y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | US 5 928 038 A (BERG PAUL CHRISTOPHER ET AL)<br>27 July 1999 (1999-07-27)<br>* column 5, line 38 - line 49; figure 5 *           | 4-7                                                        |                                                         |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | EP 0 818 851 A (SUMITOMO WIRING SYSTEMS)<br>14 January 1998 (1998-01-14)<br>* page 2, column 1, line 10 - line 32;<br>figure 9 * | 1-11                                                       |                                                         |
| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                  |                                                            | <b>TECHNICAL FIELDS SEARCHED (Int.Cl.7)</b><br><br>H01R |
| Place of search<br><b>THE HAGUE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                  | Date of completion of the search<br><b>3 February 2003</b> | Examiner<br><b>Criqui, J-J</b>                          |
| <b>CATEGORY OF CITED DOCUMENTS</b><br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document |                                                                                                                                  |                                                            |                                                         |

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ON EUROPEAN PATENT APPLICATION NO.**

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03-02-2003

| Patent document<br>cited in search report |   | Publication<br>date |    | Patent family<br>member(s) | Publication<br>date |
|-------------------------------------------|---|---------------------|----|----------------------------|---------------------|
| US 5518428                                | A | 21-05-1996          | JP | 2813717 B2                 | 22-10-1998          |
|                                           |   |                     | JP | 6310199 A                  | 04-11-1994          |
| US 5928038                                | A | 27-07-1999          | EP | 0952634 A2                 | 27-10-1999          |
|                                           |   |                     | JP | 3092066 B2                 | 25-09-2000          |
|                                           |   |                     | JP | 11329585 A                 | 30-11-1999          |
| EP 0818851                                | A | 14-01-1998          | JP | 3211672 B2                 | 25-09-2001          |
|                                           |   |                     | JP | 10027653 A                 | 27-01-1998          |
|                                           |   |                     | CN | 1174426 A , B              | 25-02-1998          |
|                                           |   |                     | DE | 69716356 D1                | 21-11-2002          |
|                                           |   |                     | EP | 1039586 A1                 | 27-09-2000          |
|                                           |   |                     | EP | 0818851 A1                 | 14-01-1998          |
|                                           |   |                     | US | 5980331 A                  | 09-11-1999          |

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82